Butterfly & Other Invertebrates Club Inc. Newsletter

ISSUE NO: 16 DATE: MARCH, 2000 ISSN: 1236-0006

CLUB PLANNING AND ORGANIZING GROUP - 2000

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PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter. See BOIC Programme.

CONTACT ADDRESS

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AIMS OF ORGANISATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organise excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:
March issue – February 21st   June issue – May 21st
September issue – August 21st   December issue – November 21st

EDITORIAL

Hello all, and Happy New Year. Welcome to new members and welcome to our 16th issue. Through this newsletter we are starting to collect a substantial amount of knowledge which is being shared with over 80 members, with thanks to our newsletter compiler, Daphne Bowden and the many people who write articles, assist with accuracy of scientific information and various other tasks.

At our AGM in January we welcomed Rosalyn Popple as our new secretary, and expanded our planning and organising committee with Lindsay Popple and also Lois Hughes as our Publicity Officer. Thank you for offering your services to the Club.

As per the Publicity Officers report, Lois has had considerable success in publicising our Club with articles in Better Homes and Gardens and in the Sunday Mail recently. This has been generating many requests for information and locating new members who thought they were isolated in their interest in this subject.

Please note that all our planning meetings are open to all members to attend. We often share very interesting information at these meetings.

Helen Schwencke

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PRESIDENT'S REPORT

President's Report 1999, to be delivered to AGM 30th January, 2000, at John Moss's place, 30 Melaleuca Drive, Capalaba.

I would like to start this year's President's report by heartily thanking the ongoing support the club has received from its members, and most particularly it's committee members. Without this support a club like ours would wither on the vine, whereas we'd rather let the butterfly caterpillars eat the vines. Thanks and thanks again.

We are now entering our 6th year as a Club, and have grown from about 30 members when we started to over 80 at last count, with more joining regularly. The recent growth has been largely the result of having produced the Swallowtail poster in 1997, and the subsequent publicity and promotion it has been receiving through the efforts of lots of people. Some of these efforts include promoting the poster in national magazines, through stalls at festivals, through direct letter writing to schools, and through word of mouth by club members to members of other clubs and societies. Most specific thank here goes to Lois, Frank, Terri and John. All of these efforts are paying off handsomely.

1999 saw the production of our fifteenth newsletter. It has now been in production for four years, and has been growing and developing. We regularly receive glowing feedback about our newsletter. It seems we have struck a good mix of scientific accuracy with popularity and speaking in lay people's language. Again, this feat couldn't be possible without the dedicated commitment of our contributing members. The thanks in particular goes here to Daphne for pulling the materials together, persevering at times with difficult equipment (now hopefully solved), Lois for her delightful illustrations and John for scientific referencing and accuracy checking. Thanks also goes to John and Frank in particular for keeping a very constant stream of articles going, but also to everyone else who writes letters, makes observations or otherwise shares their knowledge or questions with us. Many thanks.

After a year of substantial effort in 1998 to develop an interim recovery plan for the Australian Fritillary we were disappointed to learn that our project was not funded. The funding submission in and of itself was a substantial effort, so it was quite disappointing, after everyone's contribution to the project, and a wait for the result from February to October. We will need to reconsider how we progress this project in the future. A number of club members are progressing this project informally. The Brisbane City Council received its report on the work done on this project in the Brisbane area with thanks to Frank.

This year saw many interesting and eventful excursions and guest speakers. The excursions included excursions to White Rock, looking at bushfood, butterflies and glow-worms in the Currumbin Valley (led by John Palmer), seeing the fireflies near Mudgeeraba (with the Glossy Black Cockatoo Group), and an excursion to Pine Mountain (led by John Moss). Unfortunately our end-of-year dragonfly excursion was postponed due to a lack of solar energy needed to power these creatures. A few of us still met at the Mt. Cootha Botanic Gardens, and we did see one or two dragonflies, but it started raining more and more heavily.

Memorable talks included one on Slaters by Glen Ingram, one on photographing small animals by Robert Ashdown and one on the intricacies of snails by John Stanisic. Thanks also goes to David & Margery Barnes for inviting the club to be present at an Open Garden Scheme weekend at their property at Bracken Ridge, and thank you for supporting the club with a donation from the takings of this event.

Throughout the year our quarterly planning meetings to conduct the business of the association and plan the program and newsletter have continued. These meetings frequently become an interesting exchange of information. All members are welcome to attend.

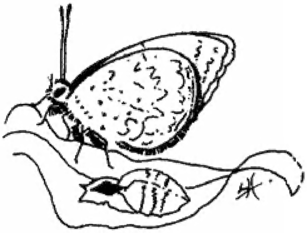
Last but not least, I'd like to thank Rob, John and Georgina for the roles they've played as treasurer, vice-president and secretary, to Terri, Daphne and Kay for their involvement in the committee, to Lois for her strong support for the club, and to everyone who comes along to our meetings and activities. I have enjoyed your company and shared interest in invertebrates. I would also like to thank incoming members of the committee for taking on new roles. *Helen Schwencke - President*

EXCURSION REPORT

Part 3 : "Kholo Enviroplan Reserve" near Pine Mountain, Ipswich

This report details the writer's third visit and the Club's first official (full) visit to this 37.4 hectare reserve on the Brisbane River, on Sunday 14th November, 1999. As mentioned in Part 2 (Issue No. 15 – December 1999) the May 16th joint BOIC/SGAP excursion yielded 33 butterfly species – these were listed in Frank Jordan's report (Issue No. 13 – June 1999). An additional 7 species were noted on the 3rd November reconnaissance and a further 7 new species were seen on the 14th November – these are listed at the end of this report.

We met early morning at the Kholo Botanic Gardens where we were treated to an assemblage of rainforest tree species from various parts of eastern Australia. Several local butterfly species including the Speckled Line-blue (*Catopyrops florinda*) and the common Pencilled Blue (*Candalides absimilis*)



Pencilled Blue

were flitting about the new growth of their respective host-plants Native Mulberry (*Pipturis argenteus*) and several sapindacids (Harpullias and Tuckeroos). Also present (heard but not seen) was the large Bottle Cicada, whose familiar intermittent 3-5 note clickings kept us in anticipation of its whistling dusk song (see Creature Feature, Issue No. 15 - December 1999). Lindsay and I also noted the familiar (to us) songs of two forms (probably species) of *Pauropsalta annulata* the Brisbane "Sprinkler Squeaker" and the "Southern Red-eyed Squeaker" the latter calling from high up in the outer foliage of some large stringy-bark eucalypts.

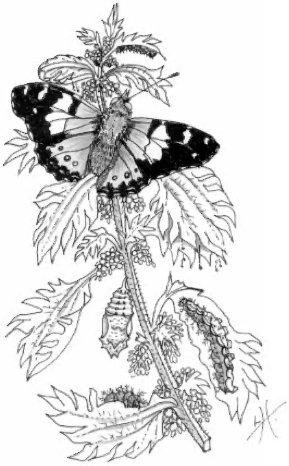
Meanwhile, whilst standing on a concrete bridge, overlooking a broad shallow pond, the other members were being entertained by a (swimming) largish light brown snake, which we presumed was a harmless, freshwater Keelback and not the feared and venomous rough-scaled species! All this activity and, by midmorning, we had not even reached our primary destination.

We finally arrived at the reserve and commenced the steep long walk to the vine scrub along the fairly degraded, stock damaged, easement road. Several common butterfly species were seen, as well as egg clusters and larvae of Caper White butterflies on the Capparis bushes.

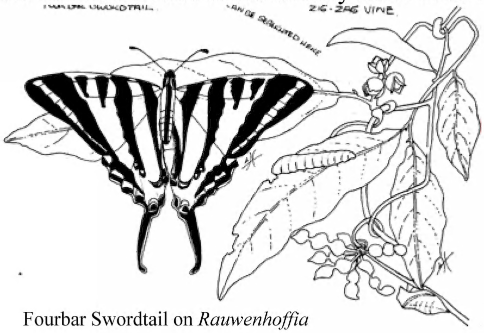
The first new species seen was a medium-sized, purple Azure species, probably *Ogyris olane*, flying fairly fast and high overhead. Some doubt has been expressed about the validity of an earlier *Ogyris* sighting (of the 16th May 1999). In retrospect it was more likely to have been a female of either *Ogyris zosine* or *Ogyris genoveva*. These butterflies usually fly high and fast and thus elude capture – it is only rarely that a resting adult specimen can be found within net reach. Even when they are "hill-topping" they rarely alight for longer than a few seconds. Thus very few sightings can be confirmed with a record beyond doubt.

Next several Big Greasy (=Clearwing Swallowtail) females were observed flying low down in the rank grass obviously searching for oviposition sites. Their hostplant an, as yet, undescribed species of *Aristolochia* which characteristically trails along the ground, has been recorded from this site, but it seemed they were utilizing the ?leaves ?flowers of the exotic Dutchman's Pipe Vine, a not uncommon weed in one part of this reserve.

Near this site was a clump of stinging nettle, and it wasn't long before a search turned up a few spent pupae of the Australian Admiral, the larvae of which feed in gregarious clusters on the nettle leaves. We didn't record whether the nettle was the exotic weed


Australian Admiral

or the less common native. Shortly after, a Pale Triangle (*Graphium eurypylus*) flew past, fast-tracking on a direct bearing for one of its hostplants further up the hill. On our last visit we had found an early instar larva of this species on one of its hosts, Rauwenhoffia or Zig-Zag Vine (*Melodorum leichhardtii*). At the time we had seen an adult Fourbar Swordtail in its vicinity and initially presumed the larva was of that species.



Fourbar Swordtail on *Rauwenhoffia*

Our next butterfly sighting was of a less often encountered species and a relation of the Rare Red-eye seen on the previous visit. Through the filtered sunlight, a brief shadow on the ground alerted us to a "Flat" that was flitting between trees of the canopy, about 5 metres above our heads. At first we thought it to be a Common Red-eye, but as this is mainly a dusk flyer (unless disturbed) we were not surprised when it turned out to be an Eastern Flat (*Netrocoryne repanda*). Although it eluded capture, this time we were sure of its identity.
It was at this spot that we encountered several specimens of a *Psychopsis* lacewing (netting a few of identification purposes) and watched their remarkable mating routine, which is described elsewhere in this issue.

A further comment about the colour form of Australian Gull (*Cepora perimale scyllara*) found on this excursion is relevant (see "Bye-Gone Butterfly Days", Issue No. 15 - December 1999). On this occasion we saw the much brighter spring form, having seen both the winter and summer forms last May at this site. Like the Caper White and the Pearl-whites, its larva feed on Capparis, which must be a very resilient plant to be able to accommodate so many individuals of so many species.

The butterfly total for this reserve is now 47 species. We wonder what further surprises will await us on our next visit this February 2000!

John Moss

List of butterflies from "Kholo Enviroplan Reserve" near Pine Mountain, Ipswich.
This is additional to F. Jordan's report (Issue No. 13 – June 1999).

Scientific Name – New Common Name – Former Common Name.
Chaetocneme denitza – Ornate Dusk-flat – Rare Red-eye
Netrocoryne repanda repanda – Eastern Dusk-flat – Eastern Flat
Toxidia parvula – Banded Grass-skipper – Parvula Skipper
Ocybadistes flavovittata – Narrow-brand Grass-dart – Common Grass Dart
Protographium leosthenes – Four-barred Swordtail – Fourbar Swordtail
Graphium eurypylus – Pale Triangle – Pale Green Triangle

Cressida cressida – Clearwing Swallowtail – Big Greasy
Elodina queenslandica – Glistening Pearl-white – N/A
Vanessa itea – Yellow Admiral – Australian Admiral
Ogyris olane – Dull Purple Azure – N/A
Prosotas felderi – Southern Line-blue – Hairy Line Blue
Erysichton lineata – Hairy Line-blue – Hairy Line Blue
Candalides absimilis – Common Pencilled-blue – Pencilled Blue
Everes lacturnus – Tailed Grass-blue – Tailed Cupid

John Moss

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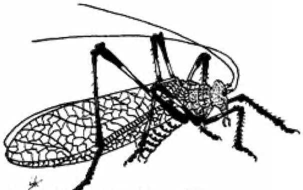
Excursion report – 30th January, 2000 to Betty Goleby's Mt Cotton Rainforest Gardens

Eastern Brown (Purple) Crow

Hot and humid weather (with the threatened showers thankfully staying away) was the order of the day for our half day outing to Mt. Cotton.

The area proved to be most productive with over 30 species of butterfly seen and 17 species of cicadas identified.

The highlights were larvae of 4 butterflies – Australian Gull, No Brand Grass Yellow, Wanderer and in what was a first for most of us, Eastern Brown (Purple) Crow. The latter are not often seen and as if to illustrate why, subsequent attempts to rear and release the larvae were unsuccessful. In addition several striking larvae of the Joseph's Coat moth (a day flying moth) were found on its host plant *Cissus opaca*. A spectacular male mountain katydid with blue and red stripes was also a first for most of us. Some dragonflies were seen (most unidentified!!) but we were able to record *Rhyothemis graphiptera, Rhyothemis phyllis chloe, Orthetrulm villosovittatum and Diplacodes bipunctata.*


Male Mountain Katydid

A very pleasant morning before tackling the A.G.M.

Butterflies sighted included – Large Dingy Skipper (*Toxidia peron*); Green Grass Dart (*Ocybadistes walkeri*); Macleay's Swallowtail (*Graphium macleayanus);* Blue Triangle *(G. sarpedon*); Pale Triangle *(G. eurypylus*); Orchard Swallowtail (*G. Aegeus*); Big Greasy (*Cressida cressida*); Lemon Migrant (*Catopsilia Pomona*); Yellow Migrant (*C. gorgophone*); No Brand Grass

Yellow (*Eurema brigitta*); Common Grass Yellow (*E. hecabe*); Narrow-winged pearl-white (*Elodina padusa*); Australian Gull (*Cepora perimale*); Common Albatross (*Appias paulina*); Common Jezabel (*Delias nigrina*); Evening Brown (*Melanitis leda*); Common Brown Ringlet (*Hypocysta metirius*); Dingy Ringlet (*H. pseudirius*); Orange Ringlet (*H. adiante*); Tailed Emperor (*Polyura sempronius*); Glasswing (*Acraea andromacha*); Common Aeroplane (*Phaedyma shepherdi*); Australian Leafwing (*Doleschallia bisaltide*); White Nymph *(Mynes geoffroy);* Blue Tiger *(Tirumala hamata);* Wanderer *(Danaus plexippus*); Lesser Wanderer (*D. chrysippus*); Eastern Brown (Purple) Crow (*Euploea tulliolus*); Common Crow (*E. core*); Pencilled Blue (*Candalides absimilis*); Yellow-spot Blue (*C. xanthospilos*); Six Line Blue (*Nacauba berenice*); Double-spotted Line blue (*N. biocellata*); Pea Blue (*Lampides boeticus*); Common Grass Blue (*Zizina labradus*); Tailed Cupid (*Everes lacturnus)*

Cicidas sighted included – Razor Grinder (*Henicopsaltria eydouxii*); Cherry Nose (*Macrotristia angularis*); Black Yodeller (*Psaltoda pictibasis*); Yellow Belly (*P. harrisii*); Clanger (*P. claripennis*); Phantom Knight (*P. brachypennis*); Brown Bunyip (*Tamasa tristigma*); Wattle Cicada (*Cicadetta oldfieldi*); Paper Bark Cicada (*C. hackeri*); Bronze Bark Buzzer (*Pauropsalta (marginata) circumdata*); Red Squeaker (*P. rubea*); Bark Squeaker (*P. corticinus*); Small Bark Squeaker (*P. fuscata*); Treetop Ticker (*Cicadetta sp. Nr landsboroughi*); Black Tree Ticker (*Birrima varians*); Floury Baker (*Abricta curvicosta*); Small Bottle Cicada (*Chlorocysta vitripennis*).

Rob MacSloy

REPORTS

Land Snails of South East Queensland

Presented by Dr. John Stanisic, Qld. Centre for Biodiversity, Queensland Museum

Land snails belong to the Phylum Mollusca which also includes chitons, marine gastropods such as cone shells and carrier shells The latter (family Xenophoridae) pick up objects from the ocean floor and attach them to their shells. Cephalopods (octopus and squid), nudibranchs and bivalves also belong to this group. Most molluscs are marine and a relative few live in freshwater.

There are currently about 800 species of native land snails described (=named) from Australia. However, recent research by staff of the Queensland Museum suggests that this number could be closer to 2000. There are 50 to 55 species in the Greater Brisbane region- an area roughly bounded by Mt Tamborine, the Bay Islands and the D'Aguilar Range. In Australia land snails inhabit all areas of the continent including the dry Red Centre. In eastern Australia most are confined to rainforest (a definition which includes dry rainforest communities such as semi-deciduous vine thickets)

Land snails belong to two groups. The pulmonates comprise the majority of species and are the dominant group in Australia. They usually have two pairs of tentacles with eyes at the tips of the upper pair, and breath using a lung. Australia also has a small number of operculate land snails, which like their marine relatives, have an operculum or 'lid' that seals the shell opening after the snail's foot has been withdrawn into its shell. These do not have a lung. This group represents less than 5% of the land snails world wide. They have a single pair of tentacles with eyes at their bases and breathe through an open pallial cavity by absorbing oxygen through the skin membrane. However, their open pallial cavity makes them more prone to desiccation and the operculum is an important protection device to prevent drying-out. This group is largely confined to the humid rainforests of the eastern seaboard and the southern limit for species appears to be the central coast of New South Wales.

Whereas most Australian operculate species range in size from small (10mm in shell length or diameter) to tiny (2mm in shell length and diameter) pulmonate species range in size from the very large (70mm in shell length and diameter) Giant Panda Snail (*Hedleyella falconeri*) to the very tiny Pupillidae and Charopidae. The charopids are mostly smaller than 5 mm in diameter. Fourteen to fifteen species of this family occur in the Mt Glorious area. They are usually quite flat (discoidal) and most have highly sculptured shells. In order to determine the correct species, shells of these micro-snails often need to be examined using a scanning electron microscope.

More commonly most species can readily be differentiated from each other on the basis of their shell markings and sculpturing. Important shell features for identification include size, shape, colour pattern and sculpture. Compared with tropical land snails from places such as Cuba, the Phillipines and the Solomon islands, Australia' s species are not spectacularly coloured. They are normally monochrome brown to yellow and white, often with a complex series of darker spiral bands. In contrast, shell sculpture can be a very intricate combination of spiral and axial ridges, spiral grooves and nodules. This sculpture may be part of the calcium structure of the shell or be part of the external covering-the periostracum.

The periostracum is a thin protective covering which acts to protect the shell surface from chemical damage. It is more obvious in some species than others, and often erodes away as the snail ages. One particular group of camaenids are characterised by having hairs on their shells. These hairs are extensions of the periostracum and also feature in a number of land snails from other families. These hairs break up the surface of the shell. It is thought that this creates a more cryptic shell surface making it less likely that debris, such as dirt particles, will accumulate on the shell and hinder the snail's ability to crawl about.

Land snails hatch with an embryonic shell which forms the protoconch of the adult shell. This part of the shell often has distinctive sculpture which is quite different to the sculpture found on the remainder of the adult shell-the teleoconch.

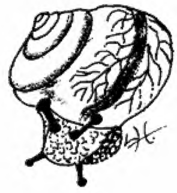
The slides presented throughout this talk were very illustrative and delightful to look at. Amongst many others, John showed us slides of:

- *Posorites fucata*, a very pretty, banded tree snail from the Hoop Pine forests of southern Queensland.
- *Papuexul bidwilli*, a very rare rainforest tree snail which is found on Mt Nebo at head waters of the Enoggerra Creek. This species is very elusive, and possibly lives high in trees.
- *Posorites conscendens,* a common tree snail from the Border ranges.
- *Sphaerospira fraseri*, a large striped camaenid from wetter parts of the Brisbane area.
- *Figuladra mattea*, a camaenid from southern Queensland which can still be found in Brisbane gardens.
- *Thersites richmondiana*, a large camaenid from Mt Tennison Woods at Mt Glorious.
- *Coelocion australis*, the only Australian member of the family Megaspiridae and whose relatives live in South America. This species ranges from Mt Mee to Bowen. It is usually found in gravelly substrate on the rainforest floor. The unusual feature of this snail is its very long shell whose tip breaks off during growth. The animal is very small compared to its shell size.
- The Giant Panda Snail (*Hedleyella falconeri*) – a species common at Mt Glorious and Australia’s largest land snail.
- The Flat-coiled Snail (*Pedinogyra rotabilis*) is common in Hoop pine scrub at Mt Glorious.
- Several species of semi-slugs (family Helicarionidae) in which the shell is reduced to a plate on the upper side of the animal. These are usually found in acidic environments such as rainforests where calcium is relatively low and conditions are perenially moist. In eastern Australia this group comprises 50 - 60 species (many yet to be named). Because of their greatly reduced shell they are at a higher risk of desiccation. Hence they tend to be active in only the most humid parts of the day.

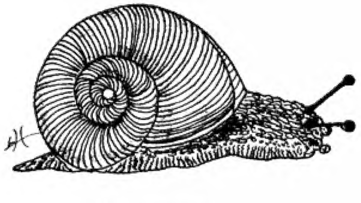
Australia also has several native slugs (snails without shells) and probably the best known in the Brisbane area is the Red-Triangle Slug (*Triboniophorus graeffei*). This species belongs to the Family Athoracophoridae. The relationships of this family within the pulmonates has been open to question because of the unusual anatomical characters possessed by the species. They do not have a simple lung like most pulmonates but instead have a system of tubules much like the tracheal system of insects. They also two eye stalks instead of the four. This species feeds at night, usually on trees and can be located, or their recent presence can be detected, by the characteristic trail of feeding tracks (like miniature ‘orbital sander’ marks) on the bark. The colour of this species can vary markedly according to where it occurs. John showed us a pink form from Mt French, and a red form from Mt Kaputar (northern New South Wales) which feeds on granite rocks. It is possible that these are different species. He also showed us slides of a gold/yellow specimen with a red triangle and a pinkish red form from Cunningham's Gap.

Pulmonates are hermaphrodites (operculate species have separate sexes) and cross fertilise when they mate. The pulmonate reproductive system is a complex system of tubules whose terminal portions are everted during mating and inserted into the opening of the opposite member of the conjugal pair. The reproductive structures are useful in diagnosing different species particularly when shell characters are very similar. The penis, in particular, is internally sculptured with a complicated series of ridges and pustules. Hydrostatic pressure inflates these sculptural structures during mating. The pattern of these ridges and pustules differs from species to species and helps land snails determine if they are the same species. The genital opening of pulmonates is in the head region just below the upper right tentacle. Mating is a protracted affair with the pair of snails staying locked together for several hours.

The mating rituals of snails and slugs can be very elaborate and involve the firing of darts (common garden snail) into the body of the partner to enhance arousal. We were shown a fascinating series of slides on the mating habits of the Giant Leopard Slug (*Limax maximus*), an introduced species from Europe which grows to 7-8cm in length. This species has a somewhat bizarre mating ritual that starts on the ground but ends in some spectacular aerial acrobatics. The mating pair initially follow each other round and round. After a while one member of the pair climbs a tree and the other follows. The leading slug then secretes a mucous string. Both slugs hang off the end of this mucous thread while mating. Eventually they part, one crawls back up the mucous string, the other eats the string, bites it off and falls to the ground. (Let me tell you the slides were far better than the description here lets on!).



Bradybaena similaris

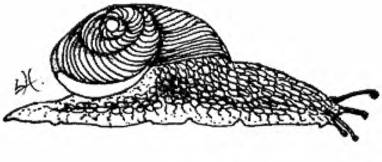


Helix aspersa

Most land snails seen by the public in their urban surrounds are introduced species. Common introductions in Brisbane gardens include the Asian Snail (*Bradybaena similaris*) and the common Garden Snail (*Helix aspersa*) as well as a number of slugs. Many of these species were introduced to Australia in the 1800’s. Other introductions include the Giant African Snail whose diet includes over 500 species of plants. The latter is a significant agricultural pest which was accidentally introduced into north Queensland in the early 1970's. However, an effective control program has led to its eradication. An adult of this species can lay 2,500 eggs in its lifetime, and, therefore, has the potential to cause major damage in agricultural areas. Adults can be up to 30cm long.

In contrast to the vegetarian habits of the introduced species, Australian native land snails species are detrital feeders- scraping fungi, lichens and algae off leaves, timber and other substrate. It is possible that many are very specific to a particular food source.

Carnivorous snails (family Rhytididae) such as *Strangesta ramsayi* eat invertebrates including other snails. This species grows to about 35 - 40 mm in animal length. Rhytidids have razor sharp teeth shaped like daggers.



Strangesta ramsayi

An important part of John's talk revolved around his work of documenting and identifying snails from dry rainforest refugia. These refugia are particularly important for land snails in semi-arid landscapes such as the Brigalow Lands and the Einasleigh Uplands west of the Wet Tropics. These refugia are usually located on rock outcrops such as granite, basalt and limestone. Limestone outcrops in particular are very rich in land snails. The rock outcrops trap moisture which allows rainforest vegetation types to flourish in an otherwise dry countryside. In turn the largely deciduous vegetation provides the basis for a well-structured leaf litter zone to develop. This provides an ideal environment in which the snails can shelter, crawl and feed. The many nooks and crannies found on these outcrops also provide a wide array of hiding places. Snails have been found buried one and a half feet deep in leaf litter among the crevices of outcrops.

John's research is showing that these refugia, which are often very small in area, are a largely unrecognised source of biodiversity. And because they do not feature any large animal species, such as birds and mammals, they are often ignored in the conservation debate and have suffered greatly through land clearing. Biodiversity loss has been great. The land snails show that they are important refugia, not only in contemporary time, but also in geological time. Of course, besides land snails these refugia are home to a wide variety of other invertebrates. The land snails are just a convenient indicator group for flagging their significance.

The family Camenidae is very diverse in Australia and occupies a wide variety of environments ranging from the Red Centre to the Kimberley. In eastern Australia the family is distributed from Cape York to southern Victoria. Many occur in the humid wet rainforests of the near-coastal areas but this research now shows that they are also diverse in these dry rainforest refugia. Many new species have been discovered, some confined to a single rock outcrop and vine thicket patch.

Snails are relatively easy animals to sample, making them another group of animals that can be enjoyed on our excursions. Importantly, the remains of shells are very useful and it is not necessary to take live specimens.

On behalf of the Butterfly & Other Invertebrates Club, I'd like to thank John for a fascinating talk on this group of invertebrates. This article was compiled from notes taken at the talk, with substantial assistance from John Stanisic. Most of the land snail discussed in this article have been illustrated in the '*Wildlife of Greater Bribane*' book produced by the Queensland Museum. The accompanying line drawings show some additional species.

Helen Schwencke

The following sketches were provided by Dr. John Stanisic for our further information. The artwork is the work of Ms Sally Elmer formerly of the Queensland Museum.

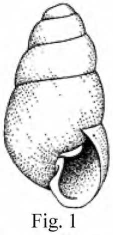


Fig. 1
Tornatellinops pressus

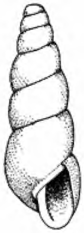


Fig. 2
Eremopeas tuckeri

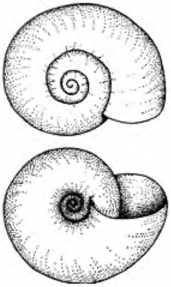


Fig. 3
Saladelos sp.

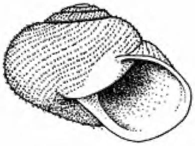


Fig. 4
Calvigenia sp

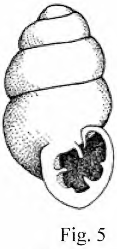


Fig. 5
Gastrocopta pediculus

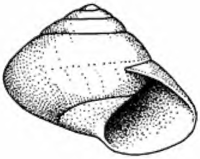


Fig 6
Pleuropoma draytonensis

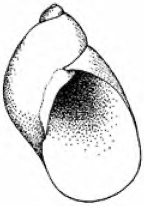


Fig. 7
Succinea sp

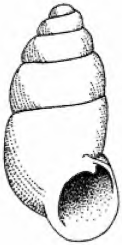


Fig. 8
Pupoides pacificus

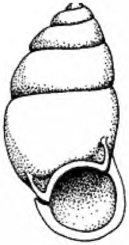


Fig. 9
Pupina wilcoxi

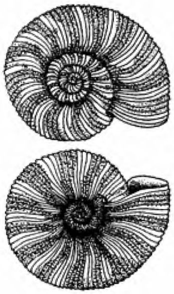


Fig.10
Nautiliropa imicron

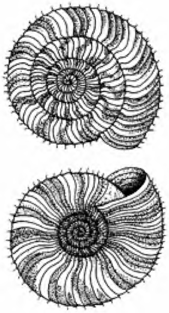


Fig. 11
Setomedea seticostata

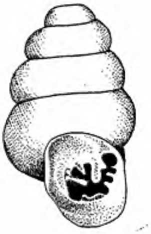


Fig. 12
Pumilicopta bifurcata

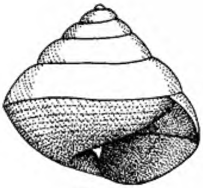


Fig. 13
Coneuplecta calculosa

Fig. 1 – ***Tornatellinops pressus***. Tiny, turreted shell with small lamella in aperature. On leaves of low shrubs. (Ht. 2mm; Family Achatinellidae).

Fig. 2 – ***Eremopeas tuckeri***. Small, white, elongate shell with fine axial ribbing. In leaf litter. (Ht. 8mm; Family Subulinidae).

Fig. 3 – ***Saladelos sp.*** Small, yellow, flattened shell with very weak sculpture. Under logs and in leaf litter. Carnivorous. (Dia. 7mm; Family Rhytididae).

Fig. 4 – ***Calvigenia sp.*** Medium sized, rounded, light-coloured, hairy shell. Under logs and rocks. (Dia. 12mm; Family Camaenidae).

Fig. 5 – ***Gastrocopta pediculus***. Very small, white, cylindrical shell with numerous lamellae in aperature. Leaf litter and under logs. (Ht. 4mm; Family Pupillidae).

Fig. 6 – ***Pleuropoma draytonensis***. Small, white, top-shaped shell. Arboreal on palms and low shrubs. Operculate. (Dia. 4mm; Family Helicinidae).

Fig. 7 – ***Succinea sp.*** Small, amber coloured shell with widely open aperture. Under logs. (Ht. 8mm; Family Succineidae).

Fig. 8 – ***Pupoides pacificus***. Very small, beige coloured shell with tiny nodule in aperture. Under logs. (Ht. 5mm; Family Pupillidae).

Fig. 9 – ***Pupina wilcoxi.*** Small, pupa-like, glassy shell. In rotting logs. Operculate. (Ht. 7mm; Family Pupinidae)

Fig. 10 – ***Nautiliropa omicron***. Very small, nautilus-like shell streaked with radiating chestnut markings. Under logs. (Dia. 5mm; Family Charopidae).

Fig. 11 – ***Setomedea seticostata***. Very small, flattened, hairy shell with darker radial markings. Under logs. (Dia. 4mm;Family Charopidae).

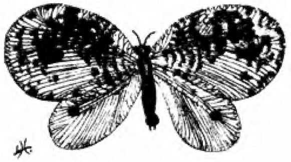
Fig. 12 – ***Pumilicopta bifurcata***. Very tiny, white elongate shell with very many lamellae in aperture. Under logs and in leaf litter. (Ht. 3mm; Family Pupillidae).

Fig. 13 – ***Coneuplecta calculosa***. Very small, light yellow, thin, top-shaped shell. Arboreal on leaves of trees. (Ht. 4mm; Family Helicarionidae).

CREATURE FEATURE

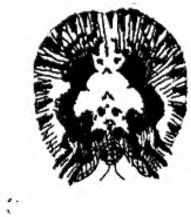
The Snake's Head Lacewing

One of the interesting findings from our visit to the Ipswich City Council's Kholo Enviroplan Reserve near Pine Mountain, on 14th November, 1999, was a remarkable lacewing, *Megapsychops illidgei*, which belongs to the family Psychopsidae.



Psychopsis lacewing

According to the CSIRO's authoritative Insects of Australia, psychopsis lacewings "appear to be rare" in Australia but reach their greatest diversity "in eastern Qld. and N.S.W.". The adults are said to be cryptic and "active mainly at night", sometimes living for up to 2 months. "The larvae occur under thick rough bark of eucalypts, and the instars are of long duration," pupation occurring in crevices in the bark – the cocoon consisting "of a loose outer envelope and an inner one of fine silk."



Lacewing Moth showing snake's head (emphasized)

This is considered Australia's most spectacular species, as can be seen from the illustrations. When the adult is at rest with the wings placed tent-wise above its body, the darker marginal wing markings appear to resemble the outline of upper and lower jaws of a gaping snake, with the paler areas becoming the mouth opening! No doubt this would offer some protection from, presumably, an insectivorous bird, which would at least hesitate, lest itself become a meal for a possible reptilian predator!!

This species appears to break the rules as far as nocturnal activity is concerned. We were fortunate to be able to watch its pairing and pre-copulatory activity. Flying just below the canopy in filtered sunlight one specimen would land on the upper side of a leaf and flap or fan its wings. Another would see (smell or hear) this activity and investigate, land in front or behind the first specimen and join in the wing fanning, which presumably is a part visual, part pheromonal sexual activity. Just which specimens were male and female was not clear and obviously further study needs to be done on this most fascinating creature.

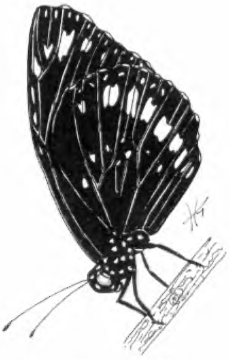
Ref. Insects of Australia 2nd ed. 1991, vol. 1 p.539

John Moss

CREATURE NOTES

Creature Note #22

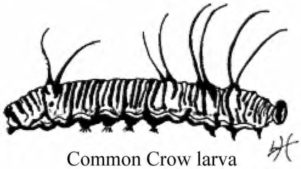
The Common Crow (*Euploea core*) is a butterfly that has a choice of several host plants scattered across three plant families. Occasionally it will lay its eggs on other similar plants in those families. One of these plants is the Silkpod, *Asclepias curassavica*. This plant comes from North America and is one of the hosts for the Wanderer butterfly.



Common Crow

The Lesser wanderer is another native butterfly which lays its eggs on this plant and these develop into normal adults. However, the caterpillars of the common crow rarely survive to adulthood on this plant. Half grown caterpillars that wander onto this plant from another host usually die shortly after starting to eat it.

So, knowing all this, I was quite surprised to find a one centimetre long common crow caterpillar on a half eaten silkpod leaf. There were no other known host plants closeby. I decided to take the caterpillar home and placed it on a potted silkpod plant. It developed normally and hatched out as a slightly smaller male adult.



Common Crow larva

I had some other second hand reports of people finding these caterpillars on Silkpod plants recently and it seems that some common crows have mastered the art of feeding on this plant.

I looked up some past research on the influence of host plant choice on the survival of common crow caterpillars by Rahman, Zalucki and Scheermeyer published in 1985. They reported that ”one larva out of 50 successfully developed to the adult stage when fed on cut leaves. It is therefore possible that stressed … plants may support complete … development.”

The caterpillar I found was feeding on a plant that was a bit wilted after a period of dry weather. This may explain the caterpillar I found as since then I have not found any large caterpillars on the well-watered silkpod plants in my own yard even though we have plenty of the adult butterflies.

Frank Jordan

PUBLICITY REPORT

As newly appointed Publicity Officer, it has been tremendously encouraging to receive such a positive response both from the Better Homes and Gardens article and from Ross McKinnon's article in the Sunday Mail. I have thoroughly enjoyed the phone contact with so many enthusiastic people and warmly welcome each one of you who have joined in response to these articles.

Graham McDonald, nurseryman, author and butterfly enthusiast will be writing a series on Butterfly Gardening, covering all aspects, commencing in the next issue. I'm sure we'll all learn much. Thanks Graham for sharing your knowledge with us.

PS. Don't be too disappointed if you've planted host plants on the list in the Better Homes and Garden's article and see no caterpillars! With the exception of Milkweed (*Asclepias curassavica*) for the Wanderer (*Danaus plexippus*) and Lesser Wanderer (*Danaus chrysippus*), we can find no reference to them being host plants for Australian species. *Passiflora aurantea* is the native host plant for the Glasswing butterfly *(Acraea andromacha*) as is the weed Corky Passion Vine (*Passiflora suberosa*).
Must fly! There's the phone again!.

Lois Hughes

"BYE - GONE BUTTERFLY DAYS"

"INSECTS OF THE ISLAND By R. Illidge

Our visit to Stradbroke Island took place, in so far as entomology was concerned, at an unseasonable time; hence, few insects were in evidence. We have, however, on previous visits during the early spring seen the place close to our late camp alive with butterflies and moths, also beetles of many kinds.

It is rich in fine Hymenoptera (Thynnidae, with apterous females, are numerous in species), Diptera, Neuroptera, &c. All these have species which are almost peculiar to it, and are not found round Brisbane. Amongst these are two butterflies of much interest, as they are at present only known elsewhere from the neighbourhood of Duaringa, west of Rockhampton. These are known to science under the names of *Nesalycaena albosericea* and *Ogyris Barnardi,* both described by the late W.H: Miskin, and the latter in honour of the late Mr. Barnard, of Coomooboolaroo, a pioneer naturalist of Australia, and revered by all students of our fauna.

Of the butterflies which were observed the most notable was *Troides richmondia*; but, this having been on the wing for some days, specimens were not in good condition.."

This April 1921 article of Rowland Illidges, concerns a visit by the Queensland Naturalist Club to Stradbroke Island during winter which he comments was "at an unseasonable time". Presumably the "birdos" or the "botanists" dictated the excursion date! We still find this happening today in our field naturalist clubs!!

He mentions but three butterflies including two with disjunct distributions involving both the island and parts of inland central Queensland. These are the Satin Blue (*Nesolycaena albosericea*) and the Bright-purple (or Barnard's) Azure (*Ogyris barnardi*). The former is still quite common on North Stradbroke Island where *Boronia rosmarinifolia* (the hostplant) occurs and also on parts of the mainland in some wallum and sandstone heaths.

The latter (*O. barnardi*) recorded for N.S.I. by Waterhouse and Lyell in their 1914 publication "The Butterflies of Australia" with an apparent December record (but no information on whether a specimen was collected) has not been recorded for NSI since then. It is clear that Illidge was only referring to these 2 species on an historical basis, because in the third paragraph he actually refers to the other species "which were observed".

It is of interest that on a subsequent (Easter 1926) visit by the QNC to Stradbroke I. (as recorded in the Queensland Naturalist Vol 6 No 1 December 1926) neither of these species were collected nor observed. In the case of *N. albosericea*, it was possibly out of season. However the "collection" of an *Ogyris olane* (Dull-purple Azure) by L. Franzen is quite significant. This is because:

a. The two *Ogyris* species are similar and can be difficult to separate. Therefore, confusion is likely to occur.
b. The hostplant of *O. olane*, the mistletoe *Amyema pendulum* occurs on N.S.I. but those of *O. barnardi* viz *A maidenii, A. quandang* and *A. miraculosum* do not appear to be present. (The Queensland Herbarium records confirm this.)

The writer has done butterfly surveys several times in the past and recently spent 9 weeks continuously on North Stradbroke Island and neither the butterfly (*O. barnardi*) nor its mistletoe hostplants have been seen. However, several *O. olane* specimens have been seen flying around *A. pendulum* parasitic on *Eucalyptus* species.

Richmond Birdwing

In view of this evidence it is considered that *O. barnardi* does not in fact occur on North Stradbroke Island and has in the past been confused with *O. olane* which does occur on the island.

Of the third species *Troides richmondia* (currently *Ornithoptera richmondia*) our Richmond Birdwing, there can be no doubt. Illidge clearly states that it was "the most notable" of the butterflies "observed". The fact that it is now locally extinct on N.S.I. is probably due to the impact of mining and urbanization on what has always been a very small area of litoral rainforest centered on the tiny Myora Springs area, which, sandwiched between a dune and the bay, suffered considerably when the west coast road was bulldozed through it to link Point Lookout and Amity Point with the township of Dunwich. Careful searching has failed to find any evidence of both the butterfly and its hostplant *Pararistolochia praevenosa.*

John Moss

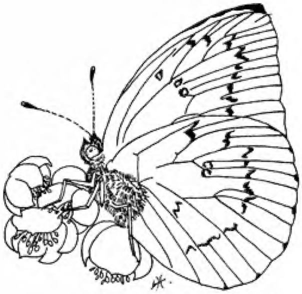
PLANT PROFILE

Senna surratensis

It's not often one finds a butterfly host plant that is reliable and also performs well in a traditional garden but this is one of them. It had been languishing in my garden for many years, an ugly duckling which has now become a beautiful swan.

This plant has had many name changes through the years as have some of the other plants once known as cassias. This and the cultivation of some foreign cassias has created a bit of confusion about the correct name of this particular plant. When I bought mine it was called *Cassia retusa*, the climbing cassia. Accordingly I planted it in the shade of another tree and waited for it to do its climbing thing. It didn't. It tried to become a shrub and only flowered occasionally.

Neither did it attract any Yellow Migrant butterflies to my yard. This butterfly is very similar to the lemon migrant but its outside wings are a more rich golden yellow. The inside forewing is white while the hindwing is golden and once you learn to look for this difference it becomes easy to separate them.



Yellow Migrant

When I saw this plant growing in another members garden I realised my mistake. His plant was growing in full sun and it was flowering profusely. He also confirmed that his plant had had yellow migrants breeding on it.

Shortly after that I removed the tree that shaded my Senna. It wilted at first but then recovered to put on a spurt of growth. About the time it started forming the first flower buds we had a yellow migrant butterfly move in and soon the plant was covered in lots of eggs.

Now that my plant is growing in the sun it looks a lot like the garden plant commonly called the Easter Cassia because of its habit of flowering around Easter. The Easter cassia has round seed pods compared with the flat seed pods of *Senna surattensis* and is not a host of the yellow migrant.

The story does not end yet.

Senna surattensis is one of a group of plants that has evolved an unusual method of pollination called buzz pollination. Instead of having pollen on the outside of the stamens it occurs bottled up on the inside of the stamens. Any insect wishing to collect this pollen must vibrate the stamen until the pollen is released. European honeybees don’t do this very well thereby leaving this valuable resource available for those native bees able to buzz pollinate flowers.

In my garden at least five different species of native bees are able to accomplish this trick and can often be seen buzzing around the flowers. I have not had the heart to catch any and send them away for scientific identification. There is one large yellow and black carpenter bee and a very small version of this bee. There is a medium sized banded orange bee and two different species of blue-banded bees. Sometimes it gets quite crowded and some of the bees appear to be trying to head butt each other. Also a leafcutter bee came and cut away pieces of the leaves for its nearby nest. I did not see this bee visiting the flowers.

This is a versatile plant is easily propagated from seed though it can grow slowly at first. It is a great addition to any butterfly garden. ***Frank Jordan***

YOU ASKED

“Molly Grubs” – What are they?

We read with interest Terry Rayner’s article “Nature’s Resilence” in Urimbirra, journal of the Chinchilla Field Naturalist’s Club. The “Molly Grubs” referred to are larvae of scarab beetles. The particular species that frequent compost heaps feeding on the decaying vegetation are different from the species that attack the roots of monocotyledons such as pasture grasses.

On the coast we have the huge larvae of the large Rhinoceros beetle which infest our compost heap and help the much smaller organisms in the composting process. We value these “grubs” and encourage their presence - we may feed the odd one or two to our Pied Butcher Birds, but otherwise they are left in peace. Their presence helps in saving us some backbreaking work in turning over the compost.

We have heard that the Yellowbelly is quite partial to scarab larvae. The native gudgeons in our pond readily take small ones, although they have a preference for worms. Strangely, although our Maggies will take both our garden worms and scarab grubs, Pied Butchers will not touch a worm if grubs are in the offing.

John and Bev Moss

……

Q. I was doing a crossword and I need a nine letter word beginning with B and with the clue being “yellow butterfly”. ***Vilma***

A. The answer is probably brimstone. This is the oldfashioned word for sulphur and several bright yellow northern hemisphere butterflies have acquired it as their common name. ***Frank***

Q. I noticed a yellow chrysalis on the Lomandra growing on the footpath. It doesn’t look like it could belong to any of the butterflies recorded as breeding on Lomandras. ***Wayne***

A. A difficult question without being able to see the chrysalis. However, in a remarkable coincidence I came across a yellow chrysalis on a Lomandra in bushland. This turned out to be the chrysalis of the Northern Jezebel. The caterpillars of this butterfly feed on various species of mistletoe. Peter Valentine, in his book Australian Tropical Butterflies, has noticed that “invariably most larvae wander away from the mistletoe and may even leave the eucalypt on which it occurs to pupate elsewhere”. There was no obvious mistletoe near the chrysalis I found so they must be able to wander quite a distance. ***Frank***

HAVE YOU GOT AN INVERTEBRATE STORY TO TELL? THIS MAGAZINE IS FOR THE MEMBERS TO SHARE THEIR OBSERVATIONS AND EXPERIENCES SO PLEASE CONTRIBUTE.

ITEMS OF INTEREST

One of the best places to track down obscure butterfly plants is the Plant Sales run by the Society for Growing Australian Plants. In 2000 these will be held on:
Autumn: Grovely TAFE College, Sunday April 16, 9am - 3pm
Spring Flower Show and Plant Sale: Mt Gravatt Showgrounds, September, Sat 9th, 9am - 5pm & Sun 10, 8am - 4pm

LIBRARY BOOKS FOR LOAN

The following books are currently available for loan at meetings:-

Australia’s Butterflies, by Peter Wilson
Butterfly Magic, by Helen Schwencke and Frank Jordan
Australian Cicadas, by Max Moulds
Butterflies of Australia, by Common and Waterhouse, 1981
Butterfly Watching, by Paul Whalley
Flying Colours, by Mike and Pat Couper
All Colour Book of Butterflies, by Robert Goodden

Lifecycle of the Ulysses Butterfly, Video, by Janet Richardson
Lifecycle of the Cairns Birdwing Butterfly, Video, by Janet Richardson

BACK ISSUES

Back Issues of the Club Magazine are available at a cost of $1 each plus postage (3-6 copies - $1.50. 1-2 copies $1.10)

ADS AND EXCHANGES

Sometimes you may have an oversupply of legally obtained caterpillars of non restricted species and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective "foster parents'. Have **YOU** advised Rob of the host plants you have available?

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Light Trapping at Whites Hill/Pine Mountain, Brisbane
When: Saturday 18th March, 2000, starting 5-6 pm
Where: Meet at Olivia Park, directly opposite No. 24 Olivia Drive, Carina Heights.
What: The Club will join the Whites Hill/Pine Mtn Community Group for a Sausage Sizzle (kindly provided by the the Whites Hill Group) followed by Light Trapping after dusk
Bring: Torch, insect repellant, polarizing glasses (to cut the glare of the light)
RSVP: John Moss on 3245 2997

Planning and Organising Group Meeting
When: Wednesday, 19th April, 2000, 7pm
What: We will be planning the club's program and exchanging information and butterfly and invertebrate ideas – All welcome
Where: A club members residence. Phone 3396 6334 for directions

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A talk on Spiders by John Lawless, Queensland Museum
When: Wednesday, 24th May, 2000 at 7 pm
Where: Staff Room, Runcorn State School, Cnr Mains Road & Beenleigh Roads Runcorn, parking in Ardagie Street
What: From some members previous experience Phil will be a riveting speaker
RSVP: John Moss on 3245 2997

A talk by Dragonfly authority Dennis Reeves
When: Wednesday, 28th June, 2000 at 7pm
Where: Downfall Creek Bushland Centre (to be confirmed - see June issue of Newsletter)
RSVP: John Moss on 3245 2997

If you plan to attend any of the above events please respond to the person indicated in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.

ACKNOWLEDGMENTS

Producing this newsletter is done due to the efforts of:

- Those who sent in letters and articles
- Lois Hughes who provided illustrations and developed the cover
- Daphne Bowden who works on layout, production and distribution
- Stephen McGoldrick who works on production and layout
- John Moss for scientific referencing
- Helen Schwencke who developed the overall design and works on content
- Frank Jordan for inspiration

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.
Membership fees are $10.00 for Individuals/Schools and $15 for family membership.

Butterfly and Other Invertebrates Club Inc.
c/- PO Box 2041
Runcorn Q 4113

Next Meeting: Pine Mountain, Brisbane, 18th March